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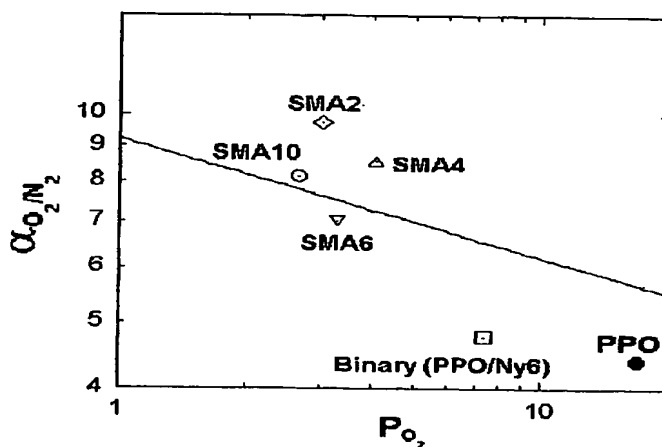
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(54) Title: POLYMERIC COMPOSITE SEPARATION MEMBRANE



(57) Abstract: Semi-crystalline polymer blended gas or chemical separation membranes are obtained by melting and processing 50-99 wt % of a thermoplastic resin, 1-50 wt% of a semi-crystalline polymer and 0.1-10 wt % of a compatibilizer. A method for fabricating semi-crystalline polymer blended gas or chemical separation membrane includes the steps of: mixing 50-99 wt % of thermoplastic resin, 1-50 wt% of semi-crystalline polymer and 0.1-10 wt % of compatibilizer; and axially drawing the resulting blend melt coming from an extrusion die. The separation membrane exhibits high selectivity when applied in a gas separation process exceeding the limit value which has been seldom overcome by the existing separation membranes as well as high permeability enough to be applied in real gas separation processes. This enhanced selectivity is ascribed to the morphology of the ternary blends and different interaction between the compatibilizer and diffusing molecules. The membrane prepared by this method can be used for chemical separation processes (such as reverse osmosis, artificial kidney, artificial lung, drug delivery, drug release, to name a few) as well as liquids and gas separation processes.

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